Commercial Furniture Stakeholder Meeting
Washington, DC
February 23, 1999

Background

A meeting of the Commercial Furniture Stakeholders Group was held on February 23, 1999 at the National Association of Manufacturers, Washington DC. The attendees are listed in the Attachment 1 below.

Action Items

1. BIFMA will take leadership of the program. ETV will serve as a stakeholder for the BIFMA program.
2. RTI will revise the large chamber test protocol based on the chair testing.
3. RTI/EPA will help BIFMA set up a QA/QC program for their testing. This could include oversight to a round robin testing; QA/QC checklist, chamber calibration and advice on how periodic lab testing would be conducted (sorbent tube spiking).
4. BIFMA will conduct workstation testing using labs of their choice.
5. RTI and EPA can help BIFMA with technical issues, not policy. This could include peer review of documents within EPA policy constraints.
6. A final ETV stakeholder meeting will be set in 12-18 months, depending on timing of BIFMA's testing and white paper. This can be tied in with the ANSI review.
7. BIFMA will have a meeting in Greensboro, NC on March 10-11. They will plan for their testing program. Les Sparks and Dave Ensor plan to attend and asked that the agenda be organized to separate policy and technical issues.
8. RTI and EPA will finalize and get approval for the chair data. It will then be posted on the web page.
9. RTI will write a protocol verification report, which will include the results of the chair testing. This will be sent to stakeholders and available on the web site, once it is finished and approved.
10. RTI, EPA and AQS may look into differences between the various chamber (i.e., sizes).
11. BIFMA will make a rough estimate of costs that industry has made for the ETV stakeholder effort (Dick Driscoll and Bryan Lundgren). This is important for EPA's report to Congress on the ETV program.

Discussion

Dave Ensor of RTI welcomed the attendees and led the introductions. There were no changes to the minutes of the previous meeting.

Dave Ensor gave a retrospective of the commercial furniture program. There was a general meeting in 1996, followed by five commercial furniture stakeholder meetings.

The stakeholders have provided input and review of the Large Chamber Test Protocol for Measuring Emissions of Volatile Organics and Aldehydes. RTI verified the protocol by testing chairs in 1998. The program is now ready to transition to the private sector.

In answer to a question about the ETV budget for indoor air products, Les Sparks of the U.S. EPA said that each sector was costing approximately $400,000. He said that as part of the lessons learned that EPA will present in their report to Congress on the program. The report will contain cost information and it would be useful if industry could provide a rough estimate of the cost of their participation in the stakeholder process. Dick Driscoll of BIFMA and Bryan Lundgren of Haworth agreed to provide that information.

Nancy Adams of the U.S. EPA provided information on the quality audit that EPA performed. Based on information of past furniture testing provided by Air Quality Sciences, EPA took sorbent cartridges from three laboratories and spiked them with four volatile organic compounds. Both relatively high and low levels of the chemicals were analyzed, with the levels being determined by actual historical commercial furniture data. Results from the analysis of the three laboratories were compared with results from a reference laboratory. The variability (standard deviation in analytical values obtained within each lab) was less than 15%, 92% of the time. The bias (percentage of sample recovered) was "40%, 88% of the time. Nancy's presentation will be made available on the web site when fully reviewed by EPA and will be included as an appendix in the protocol verification report.

In response to questions, Nancy said that the audit EPA did was only concerned with the analysis and did not involve the chambers. The analysis followed the procedures from the test protocol. Only VOCs were done, as there was not time to do aldehydes. The analysis for aldehydes uses different techniques. That, while variability of 40% may not look good, it is actually considered good for analyzing TVOCs. The "high" values were not dangerous, but rather on the high side of values found in commercial furniture emission testing.

Debbie Franke of RTI presented the results of protocol verification testing. RTI and AQS performed chamber emission tests on identical chairs. The results agreed well with earlier studies. No significant problems were found in using the protocol, however, some minor questions were raised and will be addressed. A final version of the test protocol will be issued when updated.

Bryan Lundgren gave an update on the BIFMA indoor air activities. A BIFMA committee is working to develop a testing program and a standard for workstation emissions. They will submit their standard to ANSI. There is a meeting on March 10 and 11 in Greensboro, NC to continue planning their testing program. Bryan said that BIFMA member companies wish to make sure that any testing program is affordable. This can be done by characterizing product lines, rather than testing specific products for individual bids. BIFMA is working on a standard for workstations currently and expects to test 25-35 workstations within the next year. They expect to write a white paper giving the industry perspective on workstations. Michel Comtois will do the white paper, but they

are looking for authors and reviewers for the paper. A BIFMA press release on their program was distributed (Attachment 2).

Tom Bruusema of NSF said that in their certification business, he doesn't know any program that tests all products. Generally, one test represents a large product line. Some products change so little that they never have to retest. Others expect their suppliers to provide data when changes are made.

There was further discussion of the BIFMA workstation testing and what role ETV would play in that BIFMA program. Les Sparks suggested that ETV could do a chamber qualification using standard sources for any laboratories taking part in the BIFMA testing. This will be discussed more at the BIFMA meeting in March. Les Sparks suggested that Jeff Davidson and Pauline Johnston of EPA might be able to review the paper. They will check with their management to see if that would be within EPA policy.

The BIFMA white paper was discussed. It is intended for the commercial furniture industry and their customers, although it might be cited in public articles. It is expected to be made available on the BIFMA web site. The outline of the paper will be discussed at the March BIFMA meeting.

During the afternoon, the group discussed action items for the next year. Industry requested an additional stakeholder meeting once their testing is done. The meeting concluded with Les Sparks thanking everyone for participating in the stakeholder process. Bryan Lundgren said that the industry appreciates what EPA and RTI has done.

Attachment 1
Meeting Attendees

Stakeholders Attending Meeting

Nancy Adams U.S. EPA	Dan Hare Composite Panel Association
Marilyn Black Air Quality Sciences	Pauline Johnston U.S. EPA
Tom Bruusema NSF International	Scott Lesnet Hon Industries, Inc.
Michel Comtois Bodycote Technitrol	Bryan Lundgren Haworth

Tina Conley
U.S. EPA

Jeff Davidson
U.S. EPA

Tom Donoghue
Global Upholstery Co.

Dick Driscoll
BIFMA

Dave Ensor
RTI

Debbie Franke
RTI

Bill Groah
Composite Panel Association

Leyla McCurdy
American Lung Association

Lou Newett
Knoll, Inc.

Charlie Rigby
Air Quality Sciences

Randy Ruster
Herman Miller, Inc.

Dick Santose
American Seating Co.

Les Sparks
U.S. EPA

Terry Zinn
Kitchen Cabinet Makers Association

Stakeholders Not Attending Meeting

Bill Barrett
American Seating

Thomas Daily
GSA

Barbara Ellison
GSA

Fred Gordon
Herman Miller

Randy Helm
Steelcase

Betsy Howard
U.S. EPA

Dick Hubbard
Steelcase

Peggy Jenkins

Frank Marchisello
Teknion Furniture Systems

Keith Masterson
Kimball International

Brad Miller
BIFMA

Deborah Prince
Underwriters Laboratories

Jeffery Schatz
GSA

Steve Trinkel
Kimball International

Laura Wekenman
Steelcase

Jim Williams

California Air Resources Board

Paul Kasprzak
Geiger International

Pat Kennedy
U.S. EPA

Knoll

Jianshun Zhang
Canadian National Research Council

Attachment 2
BIFMA Press Release

January 7, 1999 - BIFMA Furniture Emissions Standard Update By Dick Hubbard, Steelcase Inc.

Indoor air quality (IAQ) and the impact office furniture may have on it has been of interest to BIFMA members since 1990. The quality of indoor air in offices and commercial spaces is influenced by a large variety of factors including any chemical emissions from building materials and furnishings, office equipment and building inhabitants and their activities. BIFMA members have concentrated on understanding the nature and quantity of chemical emissions from their products. This information has been determined by dynamic environmental chamber testing of products. Since 1990, individual BIFMA members have tested more than 200 products. This data has indicated that, in the main, office furniture is not a significant contributor to poor indoor air.

Since December of 1996, BIFMA has been an active stakeholder in the U.S. Environmental Protection Agency (EPA) and Research Triangle Institute (RTI) partnership to provide an environmental verification program (ETV) for commercial furniture. The goal of this ETV is to develop test protocol for determining the chemical emissions from office furniture. BIFMA members have been working participants in all ETV meetings sharing their knowledge of the office furniture industry and the furniture emissions data they have collected over the past nine years. BIFMA has offered a detailed description of the products to be tested and how they are to be selected, acquired, shipped, stored and prepared for testing. The products to be tested are to be those comprising an office open plan workstation which includes partial height acoustical panels, work surfaces with a pedestal and overhead storage bins and a filing cabinet.

In October 1997, the BIFMA Engineering Standards Committee established a Furniture Emissions Standard (FES) subcommittee whose purpose is to develop a voluntary ANSI/BIFMA Furniture Emissions Standard. This subcommittee has worked closely with the EPA/RTI ETV activity and built on the test protocol written under the ETV program. In the first half of 1999, the FES subcommittee expects to conduct emissions testing of workstations using the established ETV test protocol. The results of this testing will be reviewed and used to prepare a white paper on office furniture emissions. Further

development and finalization of the FES will occur in the later half of 1999. The draft of the FES will be sent out for public comment in accordance with the ANSI review process. It is anticipated that the final FES will be issued in 2000.